REMARKS/ARGUMENTS

Reconsideration is respectfully requested.

Claims 1-24 are pending before this amendment. By the present amendment, claims 1, 3, 7, 11, 15 and 23 are amended and claim 20 is canceled without prejudice. Support for the limitations added to claims 1, 10, and 15 can be found in the specification of the PCT 2005/119722 at page 8, paragraph [63] and pages 4-5, paragraphs [38-43]; and FIGs. 3-7. No new matter has been added.

The drawings stand objected to for not showing every feature of the invention specified in the claims wherein the examiner objected the field emission-inducing gate portion formed on a separate substrate of claim 20 as not being shown as a feature in the drawings. The applicants have canceled claim 20. Therefore, this objection is moot.

In the office action (page 3) claims 3, 7, 11, 15 and 23 stand objected to as containing various informalities. The applicants have amended these claims to address the informalities pointed out by the examiner. Specifically, claims 3, 7, and 23 have been amended based on the examiner's suggestion. Therefore, the withdrawal of the objection to the claims 3, 7, 11, 15 and 23 is respectfully requested.

In the office action (pages 3-4), claims 1-7 and 11-24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 7,176,615. A Terminal Disclaimer is submitted herewith to overcome the obviousness-type double patenting rejection. The examiner is authorized to charge the statutory disclaimer fee of $70 (small entity) to Deposit

Account No. 12-0400. The withdrawal of the obviousness-type double patenting rejection is respectfully requested.

In the office action (page 5), claim 10 stands objected under 35 U.S.C. §112, ¶2 as being indefinite.

Claim 10 has been amended to traverse the examiner's rejection. Claim 10 now recites inter alia:

> --wherein the field emission-suppressing gate portion is divided into **a plurality of openings,**
> **wherein the penetration hole of the field emission-inducing gate portion is one** per unit pixel--.

Accordingly, the applicants respectfully request withdrawal of the 35 U.S.C. §112, ¶ 2 rejection.

In the office action (page 5), claims 1-2, 4-6, 8, 11, 15-22 and 24 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Publication No. 2002/0000771 (Ge). The "et al." suffix is omitted in a reference name.

The applicants have amended claim 1 to clarify the presently claimed invention and to traverse the examiner's rejection.

In the presently claimed invention, the field emission gate portion 200 and the field emission-inducing gate portion 300 are combined together on top of a continuous cathode portion 100 (i.e. no penetrations in the cathode portion 100 that the field emitter is formed **on** top of) to surround the field emitter that forms a cavity with a penetrating hole such that the electrons emitted from the field emitter formed on top of the cathode portion only leave through the penetrating hole. Claim 1 has been amended to clarify

this aspect of the presently claimed invention. Claim 1 now recites, inter alia:

> --a field emission-inducing gate portion formed on top of the field emission-suppressing gate portion surrounding the field emitter having a metal mesh with at least one penetrating hole that surrounds electrons being emitted from the field emitter--.

Nothing in Ge teaches or discloses this element of presently claim 1 of the present invention.

As amended, claim 1 recites that --a field emission-inducing gate portion **formed on top of the field emission-suppressing gate portion surrounding the field emitter** having a metal mesh with at least one penetrating hole **that surrounds electrons being emitted from the field emitter**--. This is shown in FIGs. 3-7 of the presently claimed invention, in which the cavity surrounding the field emitter is formed by the field emission suppressing gate portion 200 with the field emission-inducing portion 300 formed on top of the field emission suppressing gate portion 200, such that both are formed on a cathode portion 100 (i.e. no depletions in the substrate). Also, the field emitter is formed on the cathode portion and is completely within the formed cavity of the field emission-suppressing gate portion and field emission-inducing gate portion.

In contrast, the field emitter in FIG. 5 of Ge shows a conductive layer 50 that is formed with the grid electrodes 252. In Ge, the grid electrodes do not touch the cathode substrate 16 having the FE cathode in the cathode substrate. Therefore, because of this obvious separation of the grid electrodes 252 from the cathode substrate 16, Ge can not teach that the conductive layer and the grid electrodes being formed one on top of the other and/or completely surrounding the FE cathode 14. Additionally, since the grid electrodes 252 are not directly on the cathode substrate 16, Ge cannot teach or

disclose that the FE cathode (on the cathode substrate 16) is surrounded by the grid electrodes 252. Further, since the FE cathode 14 is in the cathode substrate 16, Ge can not teach or disclose the grid electrodes 252 formed on top of the conductive layer 50 that surround the FE cathode 14 because only the cathode substrate 16 surrounds the FE cathode (Ge FIG. 5).

Accordingly, the applicants respectfully submit that Ge does not teach or disclose presently claim 1 of the present invention, that recites inter alia, --a field emission-inducing gate portion **formed on top of the field emission-suppressing gate portion surrounding the field emitter** having a metal mesh with at least one penetrating hole **that surrounds electrons being emitted from the field emitter**--. Thus, the applicants respectfully submit that claim 1 is in condition for allowance over Ge.

As to claims 2, 4-6, 8, and 11, the applicants respectfully submit that these claims are allowable at least because they depend from claim 1, which is now considered to be in condition for allowance for the reasons above.

In regards to presently independent claim 15, claim 15 recites similar features to those found in claim 1. Therefore, for reasons analogous to those argued above with respect to claim 1, claim 15 is in condition for allowance over the cited references.

As to claims 16-19, 21-22, and 24, the applicants respectfully submit that these claims are allowable at least since they depend from presently claim 15 of the present invention, which is now considered to be in condition for allowance for the reasons mentioned above for presently claim 1 of the present invention.

In the office action (page 10), claims 3, 7 and 23 stand rejected under 35 U.S.C. §103(a) as being obvious over Ge.

As to claims 3, 7, and 23, the applicants respectfully submit that these claims are allowable at least because they depend from either claim 1 or claim 15, which are now considered to be in condition for allowance for the reasons above.

In the office action (page 12), claims 9 and 12-14 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 5,578,901 (Blanchet-Fincher). The "et al." suffix is omitted in a reference name.

Applicants respectfully traverse this rejection because Blanchet-Fincher, either alone or in combination with Ge fails to disclose or suggest all of the claim limitations. Specifically, claims 9 and 12-14 are allowable based on their dependency from claim 1, because Blanchet-Fincher fails to make up for the deficiencies of Ge described above.

Therefore, applicants respectfully submit that these claims, 9 and 12-14, are allowable at least since they depend from claim 1, which is now considered to be in condition for allowance for the reasons above.

For the reasons set forth above, the applicants respectfully submit that claims 1-19 and 21-24, now pending in this application, are in condition for allowance over the cited references. Accordingly, the applicants respectfully request reconsideration and withdrawal of the outstanding rejections and earnestly solicit an indication of allowable subject matter.

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This amendment is considered to be responsive to all points raised in the office action. Should the examiner have any remaining questions or concerns, the examiner is encouraged to contact the undersigned attorney by telephone to expeditiously resolve such concerns.

Respectfully submitted,

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